

Title (en)

Ultrasonic array probe apparatus, system, and method for travelling over holes and off edges of a structure

Title (de)

Ultraschall-Array-Sondengerät, System und Verfahren zum Fahren über Löcher und Kanten einer Struktur

Title (fr)

Appareil à sonde pour analyse ultrasonique, système et procédé de voyage au-dessus des trous et loin des marges d'une structure

Publication

**EP 1744156 B1 20120502 (EN)**

Application

**EP 06253612 A 20060711**

Priority

US 17863705 A 20050711

Abstract (en)

[origin: EP1744156A2] Improved apparatus, systems, and methods for inspecting a structure are provided that use a probe with sled appendages and an axial braking system. The probe uses pulse echo ultrasonic signals to inspect the structure. The sled appendages permit the probe to contact and ride along the surface of the structure and are rotatably connected and curved away from the surface of the structure to compensate for contoured surfaces and inspection around holes and edges. The axial braking system, in coordination with a motion control system moving the probe, fixes the positions of the sled appendages just before the probe travels over a hole or off an edge of the structure to prevent the probe from falling through the hole or off an edge and to permit the probe to return to the surface of the structure to continue inspection of the structure.

IPC 8 full level

**G01N 29/22** (2006.01); **G01N 29/265** (2006.01)

CPC (source: EP US)

**G01N 29/225** (2013.01 - EP US); **G01N 29/265** (2013.01 - EP US); **G01N 2291/044** (2013.01 - EP US); **G01N 2291/2694** (2013.01 - EP US)

Cited by

EP3088885A1; GB2491978A; GB2491978B; US9250213B1; US7571649B2; US9778230B2; WO2011045201A1; WO2008106535A3; US9414026B2; US8713998B2; US9234904B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**EP 1744156 A2 20070117**; **EP 1744156 A3 20100602**; **EP 1744156 B1 20120502**; AT E556318 T1 20120515; ES 2384179 T3 20120702; US 2007006657 A1 20070111; US 2007227250 A1 20071004; US 7337673 B2 20080304; US 7628075 B2 20091208

DOCDB simple family (application)

**EP 06253612 A 20060711**; AT 06253612 T 20060711; ES 06253612 T 20060711; US 17863705 A 20050711; US 75910507 A 20070606